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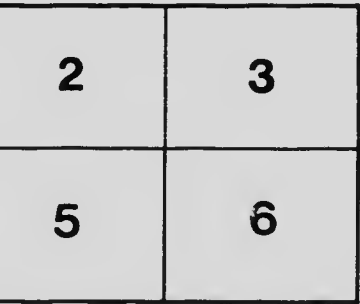
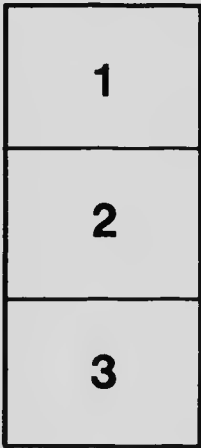
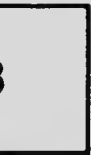
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(ANSI and ISO TEST CHART No. 2)



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DEPARTMENT OF AGRICULTURE OF THE PROVINCE OF QUEBEC

Horticultural Service

Home Gardens Section

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CIRCULAR No. 29

# GROWING RYE

## IN QUEBEC

— BY —

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Rye growing is not much in honour in Quebec, much less than it was in the days of our pioneer ancestors. However, like in many other crops, considerable progress has been made.

### Uses and importance

To-day rye still holds the most important place in the food of certain European countries. The Balkan peoples, particularly strong and vigorous, live almost exclusively on rye bread.

Rye, whole or ground, also constitutes an excellent concentrated feed for farm animals: horses, swine, sheep, milch cows; but is rather re-animating and laxative. It moreover has a bitter taste which is rather disagreeable. For these reasons it is better to use rye mixed with other seeds in the proportion of 25 to 40%. An equal mixture of oats, rye and barley makes an excellent and economical feed for fattening swine.

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### **Rye straw**

The value of rye straw as feed is rather small and is not improved to any extent by its bitterness and hard texture. It is preferable to employ it as litter and chopped to make it more absorbent.

### **Fall rye as green fodder**

Fall rye should be grown on a larger scale in this Province, particularly in view of feeding same to milch cows as green fodder in summer time. Fall rye cultivated for this particular purpose may be fed to animals three or four weeks sooner than any other fodder or mixture sown in the spring for the same object. It might be advisable to add that if fall rye is sown to be fed as green fodder, it shall be sown thick in well-manured soil, so as to obtain a fair volume of fodder.

### **Rye as pasture**

In several districts of Ontario, animals are allowed to feed on fall rye when it is 8 or 10 inches high, and when grazed, it is given another opportunity to grow and ripen its grain which is afterwards harvested in the fall; thus pastures are rather poor and lacking early in the season.

### **Rye-Description**

Rye is a cereal whose stalk and grain much resemble those of wheat. The stalk is generally a little longer and thinner than that of wheat. As to the grain, it is separated from its glume by thrashing as wheat; it is more slender and longer than the latter, and has a striking resemblance to a bare grain of oats.

### **Spring Rye and Winter Rye**

As previously given to understand, rye may be sown in the spring and in the fall. Fall rye is grown chiefly in

Ontario where it has always given better crops than spring rye.

Fall rye is hardier than fall wheat; it can withstand adverse weather conditions which the other could not. It has already been grown successfully on quite a large scale in our Province, and there is no reason to prevent its future success. A well-drained soil, naturally or artificially, is the most essential condition, and it is readily found in the light, sandy soils that are the very best for rye growing.

### **Climate**

Rye completes its growth and ripens its grain in about two months and a half time. It is a much valuable cereal for Northern countries, where the season is very short. It can be grown where neither wheat, nor barley, nor oats will mature; some has been harvested in the North-Western territories, on the shores of the Great Slaves Lake, about the 63rd degree of northern latitude. If the wide regions of Northern Quebec can ever be made to grow, one will see the rye century.

### **Soils**

Rye is at its best in poor, sandy soils, that would only yield very small crops of other cereals such as wheat, barley or oats. The assimilating power of rye is really wonderful. Rye will draw from a poor soil, the maximum of fertilizing elements that can be obtained. This is why it has been ascertained that a soil exhausted by rye remains unproductive for a long time.

Considerable exertions are made in order to harvest poor crops of oats and barley in sandy soils, whereas with less time and attention fair returns could be derived from rye crops.

When fall rye is intended to provide green fodder or a summer pasture, it shall be grown in good soil rich in fertilizing elements under easily assimilable shape. In all other cases, it is more economical to reserve the best part of the land for other cereals and to grow rye in the poorest plots.



## **Fertilizers**

It would be preferable that rye be not manured directly; as in the case of wheat and other cereals, if a good cropping system is followed, plenty of manure will be given hoed crops, corn, potatoes, roots, that are to come before rye in the same beds, and the latter will be satisfied of what is left.

Should the price of commercial fertilizers go down, one might make a trial of phosphate and potash fertilizers at the rate of about 400 lbs of *basic slag* and 100 lbs of *muriate of potash* per acre.

A good amendment of 800 to 1000 lbs of quicklime, spread every 3 or 4 years, will considerably increase the yield in light soils not coherent enough, as well as in heavy soils that are too compact.

## **Place in rotation**

Rye will thrive in a sod or dressed pasture, and also after a hoed crop; corn, potatoes, beans, etc., but never following another cereal or rye crop; as far as possible, a cereal crop should never succeed to itself.

## **Preparation of the soil**

As rye crops are usually harvested on sandy soils, the preparation of the ground is rather easy; in light soils, spring ploughings made in time are just as good as fall ploughings.

The success lies in a properly loosened and very well drained soil. Rolling immediately after seeding is also important so as to make the soil more consistent and put the particles of earth in close touch with the whole surface of the seed; it moreover has the effect of making the moisture come up to the surface.

## **Summary**

(1) *Fall* ploughing in heavy soils; *fall* or *spring* ploughing indifferently in light soils.

(2) Proper mellowing and perfect drainage including complete eradication of weeds.

(3) Rolling after seeding.

### **Seeding**

(1) *Time*.—As soon as the soil is warm enough, for *spring rye*: towards the end of August or beginning of September for *fall rye*.

(2) *Rate of seeding*.—This quantity varies in accordance with the season and texture of the soil. One will not seed as thick in the fall as in the spring, and in heavy soils as in light soils. From  $1\frac{1}{2}$  to 2 bushels per acre are recommended. If rye is used as cover crop for clover and Timothy, it would be well to sow a smaller quantity or about 1 1-3 bushel per acre.

Rye will not shoot as much as wheat, hence the reason for seeding it thicker.

### **Harvest and drying**

Rye will not be harvested before full maturity because it has not, as wheat, the property of ripening its seed on its straw after being cut.

It is also allowed to dry for a longer time than wheat because its grain is more difficultly shelled by thrashing.

### **Yield**

The average yield for rye is from 15 to 20 bushels per acre. This yield reached  $16\frac{3}{4}$  bushels in our Province in 1917, and the average price of a bushel was \$1.80; consequently, the average return of every acre of land sown in rye in Quebec was \$30.00.

These are very satisfactory results if we take into consideration that they were obtained chiefly in light, sandy soil, of small value, and often not suitable for other cereal crops.

### **Conclusion**

I will not say that we should grow as much rye as oats or barley, because these must not be abandoned for rye in soils particularly suited to them, but in sandy soils generally yielding small crops of inferior oats or barley, let us again grow rye, always giving larger crops of a higher grade of grain. Compared as food, a bushel of rye is worth a little more than a bushel of barley; whereas barley was valued at \$1.58 in 1917, the value of rye was \$1.78.

If we are still short in our wheat supply, circumstances might probably oblige us in future to add a certain quantity of other flour to our wheaten flour for bread-making, and none is more wholesome and nutritious than rye flour.



